

39 38. (New) A rock bit comprising:

a body;

at least one cutting cone rotatably mounted to an end of the body, wherein the cone includes a gage surface at a heel portion of the cone; and

a number of teeth on the cone, the teeth including a plurality of inner row teeth and a plurality of gage row teeth located near a heel of each cone, wherein the teeth include a hardfacing comprising,

steel, and

filler in the range of from 50 to 80 percent by weight, the filler comprising in the range of from 19 to 100 percent by weight spherical cast tungsten carbide particles.

REMARKS

The above amendments and these remarks are responsive to the Office Action mailed on August 10, 2001. Claim 4 has been amended for clarity. Claims 29 and 33 have also been amended. Claim 38 has been added. Claims 1-4 and 7-38 are now pending in this application. Reconsideration on the basis of the above amendments and remarks below is kindly requested.

The Examiner objected to the Consent of Assignee and the previously submitted four Declarations for reissue. A new Consent of Assignee and four new Declarations are being concurrently herewith amended to overcome the objections set forth by the Examiner.

The Examiner objected to the amendment mailed on January 10, 2002 and entered as Paper No. 6 by the U.S. Patent and Trademark Office on February 6, 2002 under 35 CFR 1.173(d) in that the amendments to the claims did not include the appropriate brackets and underlining. The Examiner suggested that the applicant re-file the Amendment including

the arguments presented therein incorporating the amended claims as shown in the attachment incorporating that application entitled "Version with Markings to Show Changes Made". In response thereto, the Amendment mailed on January 10, 2002, amended as suggested by the Examiner, is also being submitted herewith.

The Examiner rejected claims 28-35 under 35 USC §251 as being based upon new matter adding to the patent for which reissue is sought. Specifically, according to the Examiner, independent claims 28 and 32 call for a particle size that is "less than 40 mesh" and "greater than 80 mesh", respectively. These features, according to the Examiner made claims 28-35 indefinite as these limits may encompass values beyond those disclosed and therefore constitute new matter. The Examiner also rejected claims 28-35 under 35 USC §112, first paragraph, as containing subject matter which was not described in the specification in such a way to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Applicants respectfully disagree.

Claim 28 is directed to a rock bit comprising a body, at least one cutting cone, a number of teeth on the cutting cone, wherein the teeth include a hardfacing comprising filler comprising in the range of from 10 to 100 percent by weight spherical cast tungsten carbide particles having a particle size less than 40 mesh. Claim 32 is directed to a rock bit comprising a body, at least one cutting cone, a number of teeth on the cone, wherein the teeth include a hardfacing comprising filler comprising in the range of from 10 to 100 by weight spherical cast tungsten carbide particles having a particle size greater than 80 mesh.

On column 6, the specification states "according to a presently preferred embodiment, the tungsten carbide portion of the filler comprises spherical cast tungsten carbide in the range of from 10 to 100 percent by weight, with the remainder consisting of the other types of tungsten carbide particles described above. The spherical tungsten carbide particles are in the preferred size ranges of between

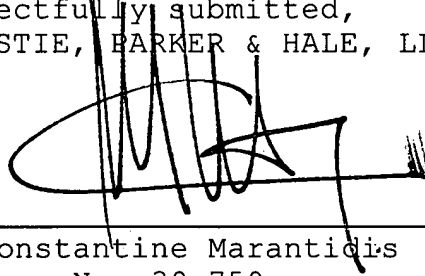
16 to 40 mesh and/or between 80 to 200 mesh, however, a 100 to 200 mesh is preferred in this finer particle size range." As can be seen, the specification specifically teaches a filler having spherical tungsten carbide particles which are in a preferred size range of between 16 to 40 mesh and/or between 80 to 200 mesh. Thus, the specification teaches use of the spherical tungsten carbide particles of less than 40 mesh and greater than 80 mesh. In the preferred embodiment disclosed on column 6, the spherical tungsten carbide particles could be less than 40 mesh down to 16 mesh and/or can be greater than 80 mesh and up to 200 mesh. Thus, the specification does provide support for spherical cast tungsten carbide particles having a size less than 40 mesh and greater than 80 mesh as required by claims 28 and 32, respectively. Similarly, the specification reasonably conveys to one skilled in the art, at the time the application was filed, that the applicants had possession of the claimed invention, i.e., of using cast tungsten carbide particles having a size less than 40 mesh and/or greater than 80 mesh. As such, applicant submits that the rejections under 35 USC §251 and §112 to claims 28-35 should be withdrawn.

Claim 38 has been added and is directed to subject matter disclosed in the specification as originally filed. No new matter has been added. Claim 38 is directed to a rock bit comprising a body, at least one cutting cone, a number of teeth, wherein the teeth include hardfacing comprising filler comprising in the range from 19 to 100 percent by way of spherical cast tungsten carbide particles. GB 2295157 (GB '157) which was used by the Examiner in rejecting some of the claims in the Office Action mailed on August 10, 2001, discloses a hardfacing having cast carbide pellets which make up 12 to 18 percent by weight of the granules (page 4, second paragraph). GB '157 does not disclose a hardfacing comprising filler comprising in the range of from 19 to 100 percent by weight spherical cast tungsten carbide particles as required by claim 38. As such, applicant submits that claim 38 is also allowable over GB '157.

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The rejections and objections to all claims pending in this application are believed to have been overcome and this application is now believed to be in condition for allowance. Should the Examiner have any remaining questions or concerns about the allowability of this application, the Examiner is kindly requested to call the undersigned attorney to discuss them.

Respectfully submitted,
CHRISTIE, PARKER & HALE, LLP

A handwritten signature in black ink, appearing to read 'CM', is written over a horizontal line.

By

Constantine Marantidis
Reg. No. 39,759
626/795-9900

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